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## **WETLANDS OF TAMIL NADU**

(Chengalpattu, Ramanathapuram and Kanniyakumari districts)



*Bombay Natural History Society*

### Editorial

The value of wetlands is well known to science, and wetlands have been rightly regarded as 'waterlogged wealth'. Additionally, wetlands are the home for many species of plants and animals. However, in spite of their multiple value and the fact that a wetland is a self-sustaining unit, needing no fertilizers, pesticides or maintenance, wetlands have been regarded as wastelands to be put to other uses.

Except for the major wetlands of India, and especially those that are either Ramsar sites or waterbird sanctuaries, there is hardly any basic information available on the lesser known wetlands of India. In an effort to document the lesser known wetlands of our country, the ENVIS Centre at the BNHS commissioned a survey to collect baseline data on some of these wetlands. As a beginning, we conducted a pilot survey of the wetlands of three districts of Tamil Nadu during 1997-1998. However, we have not been able to expand the surveys to other districts/states as planned, due to lack of funds.

In this issue of *Buceros*, we present the results of the survey. The scenario that emerges is not bright. In many cases, the departments entrusted with the care of these wetlands do not have complete records of the wetlands in their jurisdiction. Some of the wetlands were reportedly last surveyed during the British era, and even these records have been misplaced or lost for good. Many of the wetlands visited are either neglected, polluted, or encroached upon for other uses.

Awareness has now developed in some areas (as was evident in some of the offices visited), and steps are being taken to maintain proper records or even computerise the data. However, as most of the wetlands are under the authority of the Public Works Department or local panchayats, they are primarily seen as water resources for domestic use and irrigation, and in some cases, aquaculture and recreation facilities. Very little attention is paid to the documentation or conservation of the fauna and flora of these wetlands. There is urgent need to do this, before our 'waterlogged wealth' is frittered away and lost forever.

**WETLANDS OF TAMIL NADU**

## **INTRODUCTION**

The *Directory of Indian Wetlands* (1993), a joint publication of the World Wide Fund for Nature-India and the former Asian Wetland Bureau (now Wetlands International - Asia Pacific) describes 170 wetlands of India. These are major wetlands, especially those that are significant as wildlife habitats. The sites covered by the *Directory* form only a minuscule part of the total number of wetland habitats in India.

The wetland ecosystems of India, besides the natural ones, also comprise of man-made village ponds, temple and irrigation tanks. Many of these are important repositories of biodiversity, and some have become important sanctuaries for birds and other wildlife. Sadly, over the years due to the increasing human population and hunger for land, and the advent of piped water into homes, the need and care of village and temple tanks is gradually diminishing. Many are now neglected or have been filled up to be put to other uses, and even serve as dumping grounds for the wastes of villages and cities. Additionally, ancient Indian culture which taught compassion for animals is changing, and the wildlife of these waterbodies is either hunted or treated as pests.

Documentation and collection of baseline data of a species or habitat is the first step in its conservation. As an extension of the ENVIS programme, the ENVIS Centre at the BNHS initiated steps to document the status of the lesser known wetlands of India during 1997-1998. To begin with, we carried out surveys in three districts of Tamil Nadu, namely Chengalpattu (bifurcated into Kanchipuram and Tiruvallur districts recently), Ramanathapuram and Kanniyakumari (or Kanyakumari). The job of conducting these surveys was entrusted to individuals who were trained biologists or naturalists and were based in these areas. We hope to continue these surveys annually to cover the other districts and states of India, if funds can be made available through the government, or other Indian or international conservation bodies. Discussed below are details of the wetlands surveyed in the three districts of Tamil Nadu.

## **CHENGALPATTU DISTRICT**

(Recently divided into Kanchipuram and Tiruvallur districts)

Chengalpattu district lies from 12°15' to 13°47' N and 79°34' to 80°21' E, with a geographical area of about 7888 km<sup>2</sup>. The district is divided into 13 taluks: Kanchipuram, Uthiramerur, Madurantakam, Cheyyur,

Chengalpattu, Sriperumbudur, Saidapet, Uthukottai, Tiruvallur, Tiruttani, Pallipattu, Ponneri and Gummidipoondi. The district has recently been divided into Kanchipuram and Tiruvallur districts.

The landscape is one of sandy plains, stony and gravelly wastes, and stretches of poor pasture with thorny bushes, with a few small hillocks. The forest cover is only 446 km<sup>2</sup>, of which 40% are plantations. The river system of the district consists of a series of streams which flow across it from west to east into the Bay of Bengal. It is also drained by several minor and a few major rivers, most of which are seasonal. Chief among them are Palar, Cheyyar, Coratalaiyar, Coovam and Araniar. The Buckingham Canal, an artificial waterbody constructed during the British period and which originates in Andhra Pradesh, runs along the whole coast of Chengalpattu.

Natural wetlands are few or scarce in the district – the majority of the wetlands in the district are irrigation tanks, estimated to be around 3628 or 4324 (according to different sources), either under the care of the Public Works Department (PWD) or local bodies. Most of these tanks are connected with a river system. The water of the tanks is primarily used for irrigation, and secondly, for domestic purposes. Two of the tanks of the district are noted for their birdlife: Siruthavur, and the more well known Vedanthangal Bird Sanctuary. Vedanthangal is especially important as a breeding site for large waterbirds, such as herons, egrets and other colonial nesting birds.

A total of 119 tanks of the district (Table 1) were surveyed by Dr. V. Santharam in 1997, with funds provided by the BNHS ENVIS Centre. Among these, 104 are rain-fed and 15 river-fed. Only 13 of the tanks have water throughout the year. Most of the tanks are used for irrigation and domestic purposes. Many of the tanks were infested with thick cover of *Ipomoea carnea* and *Prosopis juliflora*. Industrial pollution was recorded at Verakadu Eri in Gummidipoondi taluk and Sholinganellure in Saidapet taluk. The chief threat for several tanks is siltation, mainly due to poor maintenance of the catchment areas. Encroachment for agriculture or housing, and pollution from domestic and industrial sources are on the rise.

## **RAMANATHAPURAM DISTRICT**

The present Ramanathapuram district {area: 4232 km<sup>2</sup>; headquarters: Ramanathapuram (9°23'N and 78°53'E)}, after its division into three districts, Pasumpon, Virudhunagar and Ramanathapuram districts, comprises of the following taluks: Ramanathapuram, Paramakudi, Mudukulattur and Tiruvadanai. Additionally, the district is

divided into eight blocks: Paramakudi, Kadaladi, Ramanathapuram, Nainarkoil, Mudukulathur, Bogalur, Tiruppullani and Tiruvadanai.

The climate of the district is, on the whole, dry. It is mitigated to some extent by the sea-breeze in the coastal areas. The district lies in the lower basin of the Vaigai river, which originates on the eastern slope of the Western Ghats. The Vaigai enters the district near Paramakudi and flows into the Ramanathapuram Big Tank, the surplus of this tank flows into the sea near Attangarai. Another major river, the Gundar, rises just northwest of Aruppukkotai in Virudhunagar district and flows eastwards in Ramanathapuram district, where it empties into the Sayalkudi tank. The surplus flows into the Gulf of Mannar near Sayalkudi. Its supply channels (known as the Gundar channel) feed 15 tanks.

Ramanathapuram district has poor ground water resources and is one of the driest districts of Tamil Nadu. Irrigation is mainly dependant on the rains. To store and use the rain water, each village has a tank called *Kanmoi*, which is mainly an irrigation tank. Apart from *Kanmois*, villages also have smaller tanks called *Ooranis*. *Ooranis* are small in size (<10 acres) and are largely used for domestic purposes. A total of 377 tanks are recorded in the district, of which 143 are system tanks (river-fed) and 234 are non-system tanks (rain-fed). Of these, the Chitrangkudi wetland is an important habitat for waterbirds. The Ramanathapuram Big Tank is the largest waterbody in the district. The Chitrangkudi (Kanjirankulam), Sakkarakottai Kanmoi and Ramanathapuram Big Tank are well protected, as they support sizeable numbers of breeding waterbirds.

A special feature of the tanks in the district is their construction in series. The surplus water flowing over the weir from a tank feeds the tank lower down, and so on. Not only does the surplus water overflow into the lower tank, but the 'irrigation surplus' from the fields under the upper tank, also flows into the lower tanks. This system has both advantages and disadvantages. One advantage is the re-use of residual water after irrigation in fields irrigated by the lower tanks, which would otherwise go waste. The main disadvantage is the breaching of the whole system during heavy rains, as the excess water released during floods from the upper tanks, breaches the tanks lower down, due to the force of the rushing waters.

A total of 107 tanks of the district were surveyed by Dr .S. Alagarrajan in 1997 (Table 2). Many of the wetlands have been invaded by *Acacia nilotica* and *Prosopis juliflora* trees. As most of the tanks are far away from villages, they are relatively free of the problem of dumping of wastes. Due to the aridity of the district, lack of irrigation facilities and low cost of land, encroachment or reclamation of tanks was not a problem in this district. As most of



the tanks go dry in summer, the number of tanks with wells was higher in this district compared to the other districts surveyed. The principal threat to the tanks is intensification of agriculture in the surrounding areas, resulting in the increased application of pesticides. The water required for mixing pesticides and cleaning of the implements after use, is drawn at these waterbodies. Another threat is the increasing growth of *Acacia nilotica*, *Prosopis juliflora* and *Ipomoea carnea* in and around these tanks.

### **KANNIYAKUMARI DISTRICT**

Kanniyakumari (or Kanyakumari), the southernmost district of Peninsular India, lies from 8°03' to 8°88' N and 77°05' to 77°36' E, and has an area of 1671.85 km<sup>2</sup>. The district has four taluks, namely Vilavankode, Kalkulam, Thovalai and Agasteeswaram. The two northern taluks (Vilavankode and Kalkulam) receive higher rainfall than the two southern districts (Thovalai and Agasteeswaram). The northern districts have a number of hill ranges, with forests and rubber cultivation.

Though the district is small, it has 2748 ponds, both system (river-fed) and non-system (rain-fed). Water from the three major dams Pechiparai, Perunchani and Kodayar are channelled to a number of system tanks to the southernmost tip of the district. Because of the well planned channel system, aided by the nature of the landscape, the two southern taluks have a greater number of larger system tanks than the northern taluks, in spite of the lower rainfall in the southern parts of the district. Because of this, large areas in the southern taluks are well irrigated, and the bulk of the paddy production in the district is from these areas. At least seven wetlands (Suchindrumkulam, Theroorkulam, Meliakulam, Beemanerikulam, Thathaiyarkulam, Melakarunkulam and Putherikulam) support good populations of waterbirds.

A total of 161 tanks of the district were surveyed by Dr. S. Balachandran in 1997 (Table 3). Due to human population pressure and the high cost of land, encroachment is severe in many wetlands. The encroachment is mainly from neighbouring land owners, who extend their paddy fields and coconut groves into the wetlands. Due to the change in the land use pattern, conversion of wetlands (and paddy fields) into coconut or banana plantations is also occurring. Some are even reclaimed for housing – this is more widespread in the Agasteeswaram and Thovalai taluks. Thus, a few wetlands are being lost every year. Besides the disappearance of these wetlands, rain water goes waste into the sea, which lowers the water table and allows the intrusion of seawater along the coastal areas. The wetlands are also polluted due to heavy usage of pesticides for agriculture.

Domestic sewage and wastes from hospitals are thrown into some of the wetlands. *Acacia nilotica*, *Prosopis juliflora* and *Ipomoea carnea* have proliferated in and around many tanks.

Most of the wetlands are irrigation tanks. The tanks that are close to human settlements are used for bathing and washing. Fish culture is now common in many of the wetlands surveyed. This has been at the cost of the local fish species due to introduction of exotic carps. Fertilisers are also spread in the wetlands as part of fish culture, which may alter the wetland ecosystem. *Typha* and *Scirpus* are the two major plant species being collected on a large scale (for weaving mats) from the wetlands. People collect lotus and water chestnut (*Trapa sp.*) seeds for food. The leaves and flowers of lotus are also collected.

## **GENERAL SUMMARY**

The surveys of the three districts of Tamil Nadu revealed that the wetlands of these areas are, on the whole, neglected. In spite of the manifold benefits of wetlands to the locals in terms of resources such as water (irrigation and domestic use), fish, food plants, recharging of the water table, these water bodies are more or less neglected or are being destroyed. Many of the wetlands serve as dumping grounds for wastes from cities and villages. One major reason could be that most wetlands in India are public property. Protection of wetlands is lax or non-existent. Some of the offices entrusted with the care of the wetlands do not even have basic information on the wetlands under their jurisdiction. However, tanks which form part of major irrigation systems and those that are waterbird sanctuaries are better protected. The survey also brought out an important point in that the size of the wetland cannot be used as the sole criterion for deciding which wetland gets priority for conservation. Dry districts such as Ramanathapuram tend to have large wetlands, while those with heavy rainfall like Kanniyakumari, are a system of many smaller tanks. From all the findings, it is evident that there is urgent need to document and collect baseline information on the wetlands of India and take steps for their conservation before this 'waterlogged wealth' is frittered away and lost forever.

## **A WORD OF CAUTION**

We advise readers who intend to use the information collected on the wetlands (Tables 1-3) to verify the given size of the wetlands from other sources. There was quite a bit of confusion on the size of the wetlands in the



various PWD offices of Kanchipuram and Chengalpet districts, the source of this information. In some offices, the records did not have data on the size (total water spread) of some of the wetlands. There was only information on the *ayucut* (areas irrigated by these tanks) size, and capacities (volume) of the tanks, since it is the quantity of the water in the waterbody and the acreage of the lands irrigated that is important for the PWD (Irrigation).

Another problem was that the data available was decades old, and the unit of measurement varied from million square feet or metres, and square miles or kilometres. In some cases, the unit of measurement was not indicated at all!. We also came across an office that had two registers, each assigning a different unit of measure (sq. km and sq. mile) for the wetlands, with the same values. It was just luck that we happened to see both the registers, to realise actual conversions from non-metric to metric had not been carried out. In another office, a senior officer was adamant that *m.sq.m* stood for *million square miles* (and not *million square metres*), till a more knowledgeable subordinate pointed out to him that if that was so, one of the tanks mentioned in their records would be big enough to encompass the whole district! **Due to the reasons mentioned above, it is likely that the size of the wetland in the tables may be incorrect in some cases.**

## **FUTURE PLANS**

With the information collected from this survey, it would be ideal to complete the surveys in the other districts of Tamil Nadu. This could be progressively extended to other states. The surveys will have to be more in-depth, more time has to be spent at each site, and the information collected ideally by one team so that there is uniformity in the data collection. This data could serve as the first step in the conservation of the lesser known wetlands of our country, which are disappearing with the passing years. We will need funding for a jeep, fuel, maintenance, and salaries for a driver and a biologist. Anyone interested in funding the project?



**ABBREVIATIONS USED IN THE TABLES**

P - Perennial	N - No	PT- Protected	En - Encroachment	Irr - Irrigation
NP - Non perennial	Y - Yes	UP - Unprotected	Sn - Siltation	Drk - Drinking
Rnf - Rainfed	? - no data/uncertain	PWD - Public Works Department	Sq - Sand quarrying	Dom - Domestic
Rif - Riverfed	- nil	BS - Bird Sanctuary	Fl - Filling	Fis - Fishing
R - River			Pl - Plantation	FC - Fish culture
C - Canal			Bk - Brick kiln	Grz - Grazing
			Lc - Lorry cleaning	Ind - Industries
			Ip - Industrial pollution	
			Dp - Domestic pollution	

**Table 1. Wetlands of Chengalpattu\* District**

(\* recently divided into Kanchipuram and Tiruvallur districts).

Name of wetland	Size (ha)	Perennial/ Non-perennial & Source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Kanchipuram Taluk</b>								
Parandur I & II	?	RnF, Kambahhal C.	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Fis
Valathur	308	RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (5 %)	Irr, Fis, Dom
Govindavadi	?	NP, C	N	UP	PWD	Sn, En	-	Irr, Dom, Fis
Kuram	?	NP, RnF & Kambahhal C.	N	UP	PWD	Pl	-	Irr, Fis, Dom
Damal	1513	NP, RnF	N	UP	PWD	Sn, En	-	Irr, Dom
Sevilimedu	?	NP, RnF	N	UP	PWD	En, Sn	<i>Prosopis juliflora</i> (40%), <i>Ipomoea carnea</i> (5%)	Irr, Fis
Kallipattu	?	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (5%)	Irr, Fis
<b>Uthiramerur Taluk</b>								
Uthiramerur Eri	218	NP, RnF & Cheyyar C.	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (<5%)	Irr, Dom
Thirupulivanam Eri	25	NP, RnF & Cheyyar C.	N	UP	PWD	Sn	-	Irr, Dom, Grz
Marudham Eri	10	P, Cheyyar C.	Y	UP	PWD	Sn, En	-	Irr, Dom
Katteri	?	P	?	UP	Panchayat	Sn	<i>Ipomoea carnea</i> (<10%)	Irr, Dom
Puthali	?	P, RnF	Y	UP	PWD	Sn	<i>Ipomoea carnea</i> (5%)	Irr
Malayankulam Eri	?	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (15%)	Irr, Grz
Kadalmangalam Eri I& II	30	NP	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (40%), Grass (< 10%)	Irr, Dom
Kunnavahham Eri	?	NP, RnF	N	UP	PWD	Sn	<i>Aacia</i>	Irr, Dom
Kurumbarai I& II	I = ? 16	NP	N	UP	PWD	Sn	<i>Ipomoea carnea</i> & grass (>75%)	Irr
Salavakam Eri	37	P	Y	UP	PWD	Sn	<i>Ipomoea carnea</i> (<50%), grass	Irr
<b>Sriperumbudur Taluk</b>								
Valapuram	13	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Fis
Mannur	9	NP, RnF	N	UP	PWD	Sn	-	Irr, Fis, Dom
Chembarambakkam	300	P, RnF Krishna C.	Y	UP	PWD/ Metrowater	Sn	-	Drk., Dom
Edayarpakkam	10.6	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (3%)	Irr, Dom, Fis
Kottur	?	NP, RnF	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (80-90%)	Irr
Ekanapuram	9.5	NP, RnF	N	UP	PWD	Fl	<i>Ipomoea carnea</i> (25%)	Dom, Irr, Fis
Thenneri	?	P	Y	UP	PWD	Sn	-	Irr, Dom
Sriperumbudur	50.3	Part P, RnF	Y	UP	PWD	Sn	-	Irr, Dom, Fis

Name of wetland	Size (ha)	Perennial/ Non-perennial & Source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Chengalpattu Taluk</b>								
Peria Eri	6	NP, RnF	N	UP	PWD	Sq	<i>Ipomoea carnea</i> (20%)	Irr, Dom
Chiteri Eri	2	NP, RnF	N	UP	PWD	Sq	<i>Ipomoea carnea</i> (20%)	Irr, Dom
Thandalam Eri	?	NP	N	UP	Panchayat	Sn, En	<i>Ipomoea carnea</i> (10%)	Irr
Alathur	11	NP	N	UP	PWD, Panchayat	Sn, En	-	Irr, Dom
Paianur Eri	?	NP, RnF	N	UP	PWD	Sn, En	-	Irr, Dom
Pooncheri + Painur II Eri	48	NP, RnF	N	UP	Panchayat	Pl	-	Irr, Fis, Dom
Kuzhipanthandalam Eri I & II	77	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (25%)	Irr, Dom
Echur Eri	53	NP, RnF	N	UP	?	Sn	-	Irr
Puliyoor	1	NP	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Agastheeswara Mangalam Eri	?	NP	N	UP	Panchayat	Sn	<i>Ipomoea carnea</i> (20%)	Irr, Dom, Fis
Saloor Eri	2	NP, RnF	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Korapattu Eri	?	NP, RnF Palar R	N	UP	PWD	Sn, Ag	<i>Ipomoea carnea</i> , grass (> 25%)	Irr, Dom, Fis
Anoor I & II	39	NP, RnF Palar R. overflow	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 5%), grass (40%)	Irr, Dom, Fis
P. V. Kalathur	310	NP, RnF	N	UP	PWD	Sn	-	Irr, Dom, Fis
Amoor Eri	123	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Siruthavoor	42	NP, RnF	N	UP	PWD	Sn	-	Irr, Fis, Dom
Trirporur Chekikadithangal	1	NP	N	UP	Panchayat	Bk, En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Sembakkam Eri	12	NP, RnF	N	UP	PWD	Bk	<i>Ipomoea carnea</i> (10%)	Irr, Dom, Fis
Acharavakkam Eri	19	P, RnF	Y	UP	PWD	Sn	-	Irr, Dom, Fis
Chengalpet lake	882	P	Y	UP	PWD	Dp	<i>Eichhornia</i>	Fis, Dom, Irr
<b>Madurantakam Taluk</b>								
Perumbair Kandigai Eri	?	NP, RnF	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> , grass (25%)	Irr
Paakkam Eri	?	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (5%), grass (25%)	Irr
Athimanam Eri	148	NP, RnF & Palar R.	?	UP	PWD	Sn	grass (> 80%)	Irr, Dom
Valluvapakkam Eri	217	NP, RnF	?	UP	PWD	Sn	<i>Acacia nilotica</i>	Irr, Dom
Vedanthangal Bird Sanctuary	?	NP, RnF & overflow	N	PT	Forest Department	Sn	<i>Barringtonia hortensis</i> & <i>Acacia nilotica</i>	Irr, Dom
Velayaputhur Eri	136	P, RnF & Uthiramerur tank overflow	N	UP	PWD	Sn	Grass (10%), <i>Ipomoea carnea</i> (5%)	Irr
Kozhiyalam Eri	?	NP, RnF & Uthiramer tank	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr



Name of wetland	Size (ha)	Perennial/ Non-perennial & Source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
		overflow						
Karikkili	?	NP	N	PT	Forest Department	Sn	<i>Acacia nilotica</i> & <i>Barringtonia hortensis</i>	Irr
Madurantakam Eri	1350	Part P, RnF	Y	UP	PWD	Sn, Dp	<i>Ipomoea carnea</i> (< 5%)	Irr, Dom
Gudalur Thangal Eri	I - 41.9 II - 801	NP, RnF	N	UP	?	En	<i>Ipomoea carnea</i> (> 70%)	Irr
Orathur Eri	?	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 5%)	Irr
Kizhvalam & Kinar Eri	15 & 526	NP, RnF & Madurantakam tank overflow	?	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 5%)	Irr
Kudapakkam or Perumbakkam Eri	?	NP, RnF	N	UP	PWD	Sn	-	Irr, Dom
Budur Eri	303	NP, RnF	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (25%), grass (75%)	Irr
Irumbedu Eri	20	NP, RnF	N	UP	PWD	Sn, Bk	<i>Acacia nilotica</i>	Irr
Kunnathur Eri	?	NP, RnF	N	UP	Panchayat	Sn, En	<i>Ipomoea carnea</i> (> 25%)	Drk, Irr, Dom, Grz
Nesapakkam Eri	4	NP, RnF & Madurantakam lake overflow	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , grass (15%)	Irr
Nesapakkam Thangal	1	NP, RnF	N	UP	Panchayat	Sn	<i>Ipomoea carnea</i> , grass (25%)	Irr, Dom, Fis
Pazhayanoor Eri	?	NP	N	UP	PWD	En	<i>Ipomoea carnea</i> (> 50%)	Irr, Dom
Endathur Eri	?	NP	N	UP	PWD	Sn	Grass, <i>Ipomoea carnea</i> (80%)	Irr
<b>Cheyur Taluk</b>								
Madavilagam Eri	?	NP, Overflow from Palar	N	UP	PWD	Sn	<i>Ipomoea carnea</i> & grass almost the entire stretch	Irr
Lathoor Eri	3	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 5%)	Irr, Dom
Vedal Eri	32	NP, RnF	N	UP	PWD	Sn, Bk, Sq	<i>Ipomoea carnea</i> (<10%)	Irr, Dom
Kadukallur Eri	?	P, RnF	Y	UP	PWD	Sn	-	Irr
Othivilagam Eri	9	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (25%)	Irr
<b>Saidapet Taluk</b>								
Rettai Eri (Madhavaram)	542	NP, RnF	?	UP	PWD	Sq, Bk, Lc	<i>Ipomoea carnea</i> (20%)	Dom, Ind
Porur Eri	320	P, RnF	Y	UP	PWD/ Metrowater	Dp, Sn	<i>Ipomoea carnea</i> (< 10%)	Drk, Dom
Pallikaranai Marshes	1	P, RnF	Y	UP	?	Fl, Dp, Ip	Tall grass/reeds, floating vegetation (> 50%)	Fis, Dom
Ambattur Eri	1663	NP, RnF	N	UP	?	Dp, Sq, En, Ip	-	Dom, Fis
Puzhal Eri (Red Hills)	4680	P, RnF Korataliyar R	Y	UP	PWD/ Metro water	Pl, Lc	-	Drk, Dom
Sholinganallur (Velaleri & Tamarraikani tanks)	120 & 130	NP, RnF	N	UP	Panchayat	En, Sn, Ip	<i>Ipomoea carnea</i> (20%)	Irr, Dom

Name of wetland	Size (ha)	Perennial/ Non-perennial & Source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Ponneri Taluk</b>								
Cholavaram (Sholavaram)	?	NP, RnF Korataliyar R	Y	UP	TWAD/ Metrowater	Sn, Lc, Sq,	-	Drk, Fis, Dom
Periakaraumbur Big & Small	53	NP, RnF	N	UP	PWD	Sn, En	-	Irr
Chinambedu	1990	NP, RnF	N	UP	PWD	Sn, Pl	<i>Ipomoea carnea</i> , <i>Prosopis juliflora</i> (50%)	Irr
Kolur (Big & Small)	1251 & 267	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (50%)	Irr, Dom
Avoor	567 & 1663	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (50%), <i>Acacia nilotica</i>	Irr, Dom
Vembedu	130 & 1049	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , <i>Acacia nilotica</i>	Irr, Dom
Medhur Large Tank	1194	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (40%), grass (20%), <i>Acacia nilotica</i>	Irr, Dom
<b>Gummidipoondi Taluk</b>								
Verakadu Eri	?	NP, RnF	N	UP	PWD	Sn, Ip	<i>Ipomoea carnea</i> (20%)	Irr, Dom
Guduvancheri Eri	1922	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , grass (50%)	Irr, Dom
Ayyanallur	2849 & 140	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , grass (50%)	Irr, Dom
Rettambedu	47	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , grass (50%)	Irr, Dom
<b>Tiruvallur Taluk</b>								
Puliyoor Eri	62	NP, RnF	N	UP	?	En, Sm	<i>Ipomoea carnea</i> (10 %), <i>Acacia nilotica</i>	Irr
Pakkam Eri	46	NP, RnF	N	UP	PWD	Bk, Sn, En	<i>Ipomoea carnea</i> (< 60 %)	Irr
Pakkam Peria Eri	121	NP, RnF	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (< 50%), <i>Prosopis juliflora</i>	Irr
Kakkalur Eri	126	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 5%)	Irr, Dom, Grz
Pandoor Eri	177	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (> 50%), grass, <i>Acacia nilotica</i>	Irr, Grz
Poondi Reservoir	3263	NP, RiF & Krishna C.	Y	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 1%)	Irr, Drk
Vengal	?	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Fis, Dom
Coovam	334	P, RnF	Y	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Fis, Drk.
<b>Uthukkottai Taluk</b>								
Vadamadurai Eri	27	NP, RnF, Arani R.	Y	UP	PWD	Sn	-	Fis, Dom, Irr
Kannigaiper Tank	60	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (30%)	Irr
Akkarapakham	999	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> , Grass (80%)	Irr, Dom
Thirunilai	306	NP, RnF	N	UP	PWD	Sn	Grass (90%)	Irr

Name of wetland	Size (ha)	Perennial/ Non-perennial & Source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Tiruttani Taluk</b>								
Periakalakattur Eri	206	NP, RnF	N	UP	PWD	Sn	-	Irr
Ramapuram Big & Small tanks	143 & 77	NP, Nandi R. overflow	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 70%), <i>Acacia nilotica</i>	Irr
Murukkambattu Eri	98 & 41	NP, RnF	N	UP	Panchayat	Sn, En	<i>Ipomoea carnea</i> (5 %)	Irr
Poonimangadu Eri	28	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (> 70%)	Irr
Thalavedu Eri	?	NP	N	UP	Panchayat	Sn, En, Ag	<i>Ipomoea carnea</i> (< 10%)	Irr, Dom
Velanjeri Eri	41	NP, RnF	N	UP	Panchayat	Sn	<i>Ipomoea carnea</i> (< 5%)	Irr
Suriyanagaram Eri	68	NP, RnF & C.	N	UP	PWD	Sn, En	-	Irr, Dom
Palayanoor Eri	85	NP, RnF	N	UP	PWD	Sn, Ip	<i>Ipomoea carnea</i> , grass (< 25%)	Irr, Grz
Manavoor Eri	213	NP, RiF Kusasthala R.	N	UP	PWD	Sn	<i>Acacia nilotica</i> (> 50%)	Irr
Orathur Eri	40	NP, RiF Kusasthala R.	?	UP	PWD	Sn	<i>Ipomoea carnea</i> , grass (> 75%)	Irr
Krishnasamudram Eri	164	NP, RnF	N	UP	PWD	Sn	-	Irr
<b>Pallipattu Taluk</b>								
Konasamuthiran Eri	6	NP	N	UP	PWD	En	<i>Ipomoea carnea</i> (> 50%)	Irr ?
Athimanjeripet Eri	12	NP, RnF	N	UP	PWD	Sn, En	<i>Acacia nilotica</i> (> 30%)	Irr, Dom
Veliagaram Eri	?	NP, Nagani R. overflow	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (> 75%)	Irr
Kolathur	14	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (> 80%), <i>Acacia nilotica</i>	Irr
Nochili Eri	4	NP, RnF	N	UP	PWD	Sn	<i>Prosopis juliflora</i> (> 50%), <i>Ipomoea carnea</i>	In disuse
Vellathur Eri	55	NP, RnF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (< 20%)	Irr
Pandravedu Eri	29	P(?), RnF	Y	UP	PWD	Sn	<i>Acacia nilotica</i>	Irr
Podaturpet Eri	3	NP, RnF	N	UP	?	En, Sq	-	Irr
Veeramangalam Eri	26	NP	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (>50%), <i>A. nilotica</i> (25%)	Irr

Table 2. Wetlands of Ramanathapuram District

Name of wetland	Size (ha)	Perennial/ Non-Perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Thiruvadanai Taluk</b>								
Mandalamanickam Kanmoi	788	NP, RnF	Y	UP	PWD	-	<i>Acacia nilotica</i>	Irr, Dom, Drk
Thottamangalam Kanmoi	92	NP, RnF	Y	UP	PWD	Fl	<i>Acacia nilotica</i> (30%) <i>Prosopis juliflora</i> (10%)	Irr, Dom, Drk
Pullukudi Kanmoi	474	NP	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr
Arasathur Kanmoi	712	NP, RnF	Y	UP	PWD	Dp	<i>Ipomoea carnea</i> (10%)	Irr
Keelakeelkudi Kanmoi	820	NP, RnF	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (30%) <i>Prosopis juliflora</i> (10%)	Irr
Raja Singa Mangalam Kanmoi	890	NP	N	UP	PWD	-	<i>Acacia nilotica</i> (40%) <i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
<b>Paramakudi Taluk</b>								
Keelaparithiyur Kanmoi	740	NP, RnF	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr
S. Kavanur Kanmoi	560	NP, RiF	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
Nelamadur Kanmoi	950	NP	Y	UP	PWD	-	<i>Acacia nilotica</i> (30%)	Irr
Sembilankudi Kanmoi	733	NP, RnF	N	UP	PWD	Fl	-	Irr
Kulavipatti Kanmoi	555	NP, RnF	N	UP	?	-	<i>Prosopis juliflora</i> (10%)	Irr
Vilathur Kanmoi	360	NP, RiF	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr
Tholur Kanmoi	202	NP, RiF	N	UP	PWD	-	<i>Acacia nilotica</i> (40%) <i>Prosopis juliflora</i> (10%)	Irr, Dom, Drk
Arungulam Kanmoi	259	NP	Y	UP	PWD	Fl	<i>Acacia nilotica</i>	Irr
Perunkari Kanmoi	257	NP, RiF	Y	UP	PWD	-	<i>Acacia nilotica</i> , <i>Prosopis juliflora</i>	Irr
Parthipanur Kanmoi	214	NP	Y	UP	?	Dp	<i>Ipomoea carnea</i> (5%)	Irr
Melayakudi Kanmoi	270	NP, RiF	N	UP	PWD	-	<i>Acacia nilotica</i> (40%)	Irr
Thenpuduvakudi Kanmoi	720	NP, RiF	Y	UP	PWD	-	<i>Acacia nilotica</i> (30%)	Irr, Dom, Drk
Venthoni Kanmoi	544	NP, RiF	N	UP	PWD	-	<i>Acacia nilotica</i>	Irr
Nemmeni Kanmoi	210	NP, RiF	N	UP	PWD	-	-	Irr
Kamudakudi Kanmoi	250	NP, RiF	Y	UP	PWD	-	<i>Acacia nilotica</i> (40%)	Irr
<b>Mudukulattur Taluk</b>								
Padanatapuli Kanmoi	88	NP, RnF	N	UP	PWD	-	-	Irr
Nagaratharkurihi Chinna	90	NP, RnF	Y	UP	PWD	Sn	-	Irr

Name of wetland	Size (ha)	Perennial/ Non-Perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
Kanmoi								
Nagaratharkurichi Kanmoi	86	-	N	?	?	-	-	-
Keelaramanathi Kanmoi	74	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (30%)	Irr
Melaramanathi Kanmoi	95	NP, RnF	N	UP	?	-	<i>Prosopis juliflora</i> (40%)	Irr
Pondampuli Kanmoi	811	NP	N	UP	PWD	-	<i>Prosopis juliflora</i> (10%)	Irr
Kandamangalam Kanmoi	107	NP, RnF	N	UP	PWD	Sn	<i>Acacia nilotica</i> (40%)	Irr
M. Pudukulam Kanmoi	711	NP, RnF	Y	UP	?	-	<i>Acacia nilotica</i> (40%)	Irr
Keelarakkulam Kanmoi	67	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (40%)	Irr
S.Thalvaikudi Kanmoi	194	NP, RnF	N		?	Sn	<i>Acacia nilotica</i> (30%), <i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
Keelakodumalur Kanmoi	95	NP, RnF	N	UP	PWD	Fl	<i>Ipomoea carnea</i> (20%)	Irr
Vilangulathur Kanmoi	92	NP, RnF	N	UP	PWD	Fl		
Valukkaikulam Kanmoi	76	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (60%) <i>Prosopis juliflora</i> (10%)	Irr, Dom, Drk
Pulithikulam Kanmoi	75	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (70%) <i>Prosopis juliflora</i> (10%)	Irr
Mookaiyur Kanmoi	111	NP	N	UP	PWD	-	<i>Acacia nilotica</i> (45%)	Irr, Dom, Drk
Appanur Kanmoi	181	NP, RnF	N	UP	PWD	-	-	Irr, Dom, Drk
Pothikulam Kanmoi	171	NP, RnF	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr
Chitrakudi Kanmoi (Kanjirankulam Bird Sanctuary)	186	NP, RnF	N	PT	Forest Department	-	<i>Ipomoea carnea</i> (10%), <i>Acacia nilotica</i> (75%)	Irr
Sonaipriyakotai Kanmoi	180	NP, RnF	N	UP	PWD	-	-	Irr
Sayalkudi Kanmoi	216	NP, RnF	N	UP	PWD	-	-	Irr
S. Keeraandel Kanmoi	163	NP, RnF	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr, Dom, Drk
Vayalur Kanmoi	95	NP, RnF	N	UP	PWD	Fl	<i>Acacia nilotica</i> (50%) <i>Prosopis juliflora</i> (20%)	Irr
Avathandai Kanmoi	71	NP, RnF	N	UP	PWD	-	-	Irr
Kirandai Kanmoi	160	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (40%) <i>Ipomoea carnea</i> (10%)	Irr
Mudukulathur Kanmoi	340	NP, RnF	Y	UP	PWD	-	-	Irr, Dom, Drk, Fis
Ilanjambur Kanmoi	280	NP	Y	UP	PWD	-	<i>Acacia nilotica</i> (60%)	Irr
Kolikulam Kanmoi	960	NP, RnF	N	UP	?	Fl, Sn	<i>Acacia nilotica</i> (40%)	Irr
Keelasirupodu Kanmoi	630	NP, RnF	Y	UP	?	-	-	-
Alangulam Kanmoi	518	NP, RnF	Y	UP	PWD	Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
Kealambar Kanmoi	442	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (50%)	Irr
Keelakottai Kanmoi	575	NP, RiF	N	UP	PWD	-	-	Irr
Savar Kanmoi	910	NP, RnF	N	UP	?	-	<i>Prosopis juliflora</i>	Irr
Nagatchi Kanmoi	378	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (10%)	Irr
Ariyakudi Kanmoi	128	NP, RiF	Y	UP	PWD	Fl	<i>Acacia nilotica</i>	Irr
Pandikanmoi Kanmoi	122	NP, RnF	Y	UP	PWD	-	<i>Acacia nilotica</i> (30%) <i>Prosopis juliflora</i> (10%)	Irr



Name of wetland	Size (ha)	Perennial/ Non-Perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
Nilayambodi Kanmoi	473	NP, RnF	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (20%)	Irr, Dom, Drk
Kummukottai Kanmoi	360	NP, RnF	N	UP	?	Fl	<i>Acacia nilotica</i> (30%)	Irr
Poovilathur Kanmoi	1120	NP, RiF	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (10%)	Irr, Dom, Drk
Mennanthi Kanmoi	996	NP, RiF	Y	UP	PWD	Fl	<i>Acacia nilotica</i> (30%)	Irr, Dom, Drk
Muthuvayal Kanmoi	210	NP, RiF	Y	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr
Kamankottai Kanmoi	450	NP	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (40%)	Irr
Kollanur Kanmoi	742	NP, RiF	Y	UP	PWD	Fl	-	Irr, Dom, Drk
Seyalur Kanmoi	752	NP, RiF	Y	UP	PWD	Sn	<i>Prosopis juliflora</i> (10%)	Irr
Veeravanur Kanmoi	610	NP, RiF	Y	UP	PWD	-	-	Irr, Dom, Drk
Vairavanendal Kanmoi	875	NP, RiF	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (30%)	Irr
Mudalur Kanmoi	716	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i>	Irr
Bogalur Kanmoi	944	NP, RiF	Y	UP	PWD	Sn	<i>Prosopis juliflora</i> (30%)	Irr
Ettivayal Kanmoi	650	NP	N	UP	?	Sn	-	Irr
Pottithaliti Kanmoi	369	NP	Y	UP	PWD	-	<i>Acacia nilotica</i> (40%)	Irr
Anumaneri Kanmoi	420	NP	N	UP	?	Fl	-	Irr
Theeyanur Kanmoi	410	NP, RnF	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
Semanur Small Tank	472	NP	Y	UP	PWD	-	<i>Prosopis juliflora</i> (10%)	Irr
Semanur Big Tank	1105	NP, RiF	Y	UP	PWD	Sn	<i>Acacia nilotica</i> (30%) <i>Prosopis juliflora</i> (5%)	Irr, Dom, Drk
Puthur Kanmoi	750	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (10%)	Irr
Thenpuduvakudi Kanmoi	720	NP, RiF	Y	UP	PWD	-	<i>Acacia nilotica</i> (30%)	Irr, Dom, Drk
<b>Ramanathapuram Taluk</b>								
Big Kenikkarai Oorani	440	NP, RnF	N	UP	PWD	Fl, En	-	In disuse
Kenikkarai Oorani	2	NP, RnF	Y	UP	Municipality	Sn	-	Dom, Drk
Peravoor Oorani	2	NP, RnF	Y	UP	Municipality	-	-	Dom, Drk
Ramanathapuram Big Tank	1450	NP, RiF	N	PT	PWD	-	<i>Acacia nilotica</i> (20%) <i>Ipomoea carnea</i> (10%)	Irr
Sakkarakottai Kanmoi	1195	NP, RnF	Y	UP	PWD	Fl	<i>Acacia nilotica</i> (60%)	Irr, Dom, Drk
Kalari Kanmoi	?	NP, RiF	N	UP	PWD	-	<i>Prosopis juliflora</i> (10%)	Irr
Pillaiyarkoil Oorani	1.6	NP, RnF	N	UP	Municipality	Fl, Dp	<i>Ipomoea carnea</i>	In disuse
Devipattinam Sudukattu Oorani	0.8	NP, RnF	Y	UP	Panchayat	Fl	-	Dom, Drk
Devipattinam Pillaiyar Koil Oorani	0.8	NP, RnF	N	UP	Panchayat	Fl, Sn	<i>Prosopis juliflora</i>	In disuse
Peruvayal Kanmoi	167	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (40%) <i>Prosopis juliflora</i> (10%)	
Vennathur Kanmoi	173	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (20%)	Irr
Devipattinam Kanmoi	?	NP, RnF	N	UP	?	-	<i>Acacia nilotica</i> (75%)	Irr
Vattakudi Kanmoi	?	NP, RnF	Y	UP	PWD	-	<i>Acacia nilotica</i> (50%)	Irr, Dom, Drk
Vannikudy Kanmoi	464	NP, RnF	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom, Drk
Chittarkottai Kanmoi	240	NP, RnF	N	UP	PWD	-	<i>Prosopis juliflora</i> (5%)	Irr

Name of wetland	Size (ha)	Perennial/ Non-Perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
Pullangudi Kanmoi	149	NP, RiF	N	UP	PWD	-	<i>Prosopis juliflora</i>	Irr
Alli Kanmoi	400	NP, RiF	Y	UP	Municipality	-	<i>Acacia nilotica</i> (20%) <i>Ipomoea carnea</i> (10%)	Dom, Drk
Amma Oorani	200	NP	N	UP	?	-	-	Dom, Drk
Madhavanoor Kanmoi	400	NP	N	UP	PWD	-	<i>Acacia nilotica</i> (10%) <i>Ipomoea carnea</i> (2%)	Irr
Madhavanoor Oorani	0.6	NP	Y	UP	PWD	-	-	Dom, Drk
Kalayanur Kanmoi	300	NP	N	UP	PWD	-	<i>Acacia nilotica</i> (40%)	Irr
Veppan Kanmoi	200	NP	Y	UP	PWD	-	<i>Prosopis juliflora</i> (10%)	Irr
Vilankulam Kanmoi	150	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (20%)	Irr
Poothondi Kanmoi	1.6	NP, RnF	N	UP	PWD	-	<i>Acacia nilotica</i> (40%)	Irr
Poothondi Oorani	0.8	NP, RnF	Y	UP	PWD	-	-	Dom, Drk
Pappa Oorani	1	NP, RnF	N	UP	Panchayat	-	-	Dom, Drk
Marikka Oorani	1.6	NP, RnF	N	UP	Panchayat	-	-	Dom, Drk
Munian Temple Oorani	0.4	NP, RnF	N	UP	Panchayat	-	<i>Ipomoea carnea</i> (80%)	Dom, Drk
Melaseethai Kanmoi	13	NP, RiF	Y	UP	PWD	Sn	-	Irr
Karunkulam Kanmoi	23	NP	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr
Mayakulam Kanmoi	23	NP	N	UP	PWD	-	<i>Prosopis juliflora</i> (5%)	Irr

**Table 3. Wetlands of Kanniyakumari (or Kanyakumari) District**

Name of wetland	Size (ha)	Perennial/ Non-perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
<b>Vilavancode Taluk</b>								
Purakkal Kulam	0.4	P, RnF, C	Y	UP	-	-	-	Irr, Dom
Nedumkulam	1.5	P, C, RnF	N	UP	PWD	En	-	Irr, Dom
Thazhakulam	3.2	P, RnF	N	UP	PWD	En, Sn	-	Irr, Dom
Oorva kulam	4.5	P, RnF, Spring	N	UP	PWD	En	-	Irr
Kamblikulam	0.6	P, RnF, C	N	UP	PWD	-	-	Irr, Dom
Kandanchira Kulam	3.0	P, RnF, RiF	N	UP	PWD	-	-	Irr, Dom
Kurunthatti Kulam	0.8	P, RnF, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (1%)	Irr, Dom
Parai Kulam	3.2	P, RnF	N	UP	PWD	En	-	Irr, Dom
Ootu Kulam	4.9	P, RnF, Spring	N	UP	Private	En	-	Irr
<b>Kalkulam Taluk</b>								
Thamarai Kulam	1.7	NP, C	N	UP	PWD	En	-	Irr
Kuthiraipanchan Kulam	2.2	NP, C	N	UP	PWD	En, Fl	-	Irr
Ambalathadi Kulam	1.6	NP, C	N	UP	PWD	En	-	Irr, lotus collection
Pungarachellan Kulam	3.3	NP, C	N	UP	PWD	En	-	Irr, Dom
Perunkulam	3.1	NP, C	N	UP	PWD	En	-	Irr, Dom
Kannanparaikulam	1.4	NP, C	N	UP	PWD	En	-	Irr, Dom
Perakulam	5.6	NP, C	Y	UP	PWD	En, Fl	<i>Ipomoea carnea</i>	Irr, Dom
Peruulaikulam	4.8	NP, C	N	UP	PWD	Fl, Dp	<i>Ipomoea carnea</i> (5%) <i>Eichhornia</i> (15%)	Irr, lotus leaf and <i>Trapa</i> seed collection
Kaniyan Kulam	3.6	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (5%)	Irr, Dom
Veerakulam	18.1	NP, C	N	UP	PWD	En	-	Irr, Dom
Mukkalampadu Kulam	2.0	NP, C	Y	UP	PWD	En, Fl	-	Irr, Dom
Kannamangalam Kulam	2.4	NP, C	Y	UP	PWD	En	-	Irr
Pungarachellan Kulam	3.4	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (5%)	Irr
Nedumkulam	1.3	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i>	Irr, lotus leaf collection
Machakulam	6.1	NP, C	Y	UP	PWD	En	-	Irr, Dom
Piranthinaserikulam	20.2	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (10%) <i>Eichhornia</i> (20%)	Irr, Dom, lotus leaf and <i>Typha</i> seed collection
Pandarakulam	1.6	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (5%)	Irr, Dom
Nullikulam	1.6	NP, C	N	UP	PWD	En	-	Irr
Alankuzhi Kulam	1.2	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Chettikulam	1.0	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Dom
Alkyanakulam	20.3	NP, C	N	UP	PWD	Sn, En, Highway passes through.	<i>Ipomoea carnea</i> (5%)	Irr, Dom

Name of wetland	Size (ha)	Perennial/ Non-perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
Periakulam	1.1	NP, C	N	UP	PWD	En	-	Irr, Dom
Perumkulam	3.1	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr, Dom
Periakulam	57.3	P, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr, Dom
Chamanchankulam	3.5	NP, C	N	UP	PWD	En, Fl, railway track trifurcates it.	<i>Ipomoea carnea</i> (5%)	Irr, Fis, Dom, <i>Trapa</i> seed collection
Kollakulam	1.6	NP, C	N	UP	PWD	En, Sn	-	Irr, Dom
Nallikulam	4.1	NP, C	Y	UP	PWD	En	<i>Eichhornia</i> (5%)	Irr, Dom
Paracherykulam	5.8	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Esalipur Kulam	13.0	NP	N	UP	PWD	En, Sn	-	Irr, Dom
Kalpatti Kulam	8.9	NP, C	N	UP	PWD	En, Sn	<i>Eichhornia</i> (15%)	Irr, Dom
Kunnathukulam	14.2	NP, C	N	UP	PWD	En	-	Irr, Dom, <i>Trapa</i> seed collection
Ayyanarkulam	1.6	NP, C	N	UP	PWD	Sn	-	Irr, Dom
Kumarakovil Kulam	7.4	C	N	UP	PWD	-	-	Irr, Dom, bathing by pilgrims
Vembanur Kulam	2.1	NP, C	N	UP	PWD	En, Fl	<i>Eichhornia</i> 5%, <i>Ipomoea carnea</i> (5%) <i>Prosopis juliflora</i> and <i>Lantana camara</i> at the edges	Irr, Dom, FC, lotus culture
Zillikulam	3.4	NP, C	N	UP	PWD	Sn, En, Dp	<i>Eichhornia</i> (15%) <i>Ipomoea carnea</i>	Irr, <i>Typha</i> leaf collection, lotus culture
VellichandaiKulam	10.5	NP, C	N	UP	PWD	-	-	Irr, Dom
<b>Thovalai Taluk</b>								
Karunkulam	18.9	NP, C	N	UP	PWD	En	<i>Prosopis juliflora</i> (5%)	Irr, Dom
Vembanar Kulam	25.0	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (10%)	Irr, Dom, <i>Typha</i> collection
Thirupathisaram Kulam	30.3	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (5 %) <i>Ipomoea carnea</i> (10%)	Irr, Dom, Fis
Veeramarthandan Kulam	9.7	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (15%) <i>Eichhornia</i> (10%)	Irr, Dom <i>Typha</i> collection
Perumalpuram Periakulam	14.4	NP,RnF	N	UP	PWD	En, Dp	<i>Prosopis juliflora</i>	Irr
Poigaikulam	11.3	NP, RnF	N	UP	PWD	En	<i>Prosopis juliflora</i>	Irr
Athikulam	12.1	NP, RnF	N	UP	PWD	En	<i>Prosopis juliflora</i> (15%)	Irr, Dom
Thazhakudi Kulam	5.4	NP, C	N	UP	PWD	-	-	Irr, Dom
Veerapuli Kulam	6.1	NP, C	Y	UP	PWD	En	-	Irr, Dom
Vishnupurathu Kulam	7.5	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Thovalai Periakulam	2.5	NP, RnF	N	UP	PWD	En	<i>Prosopis juliflora</i> (20%)	Irr
Chenbagaramanputhoor Kulam	29	NP, RnF	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%) <i>Prosopis juliflora</i> (5%)	Irr, Dom
Athichanputhur Perunkulam	13	NP, RnF	Y	UP	PWD	En	<i>Prosopis juliflora</i> (10%)	Irr, Dom

Name of wetland	Size (ha)	Perennial/ Non-perennial & source	Well	Legal Status	Authority	Threats	Weeds	Benefits to the locals
Nachiyar Puthukulam	22.2	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Puliankuruchi Kulam	20.3	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (10%)	Irr, Dom
Chidambaram Kulam	10.2	NP, RnF	N	UP	PWD	Fl	<i>Ipomoea carnea</i> (5%), <i>Prosopis juliflora</i> (10%)	Irr
Pothiakulam	3.2	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i>	Irr, Dom
Madakulam	4.8	NP	N	UP	PWD	En	-	Irr
Veerakaraippan Eri Kulam	25.5	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i>	Dom, Irr
Beemaneri Kulam	3.2	NP, C	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (5%) <i>Eichhornia</i> (10%)	Irr
Madapurathu Kulam	1.6	NP, C	N	UP	PWD	En	-	Irr
Bhuthapandiyan Kulam	15.5	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (5%) <i>Prosopis juliflora</i> (5%)	Irr
<b>Agasteeswaram Taluk</b>								
Thanapiramana Kulam	6.1	NP, C	N	UP	PWD	-	-	Irr, Dom
Kalkattu Kulam	5.7	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom, <i>Typha</i> , <i>Scirpus</i> collection
Kottuparai Kulam	0.9	NP, C	N	UP	PWD	-	-	Irr, Dom, Fis, <i>Typha</i> , <i>Scirpus</i> collection
Kadankulam	38.5	NP, C	N	UP	PWD	Sn, Dp	<i>Ipomoea carnea</i> (7%) <i>Eichhornia</i> (5%)	Irr, Dom, <i>Typha</i> , <i>Scirpus</i> collection
Nachimarkulam	24.3	NP, C	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (15%)	Irr, Dom, Fis, <i>Typha</i> and lotus collection
Pirakulam	0.8	NP, C	N	UP	PWD	En	-	Irr, Dom, Fis, <i>Typha</i> and lotus collection
Puthu Kulam	13.4	NP, C	Y	UP	PWD	En, Sn	<i>Prosopis juliflora</i> (5%) <i>Ipomoea carnea</i> (edges)	Irr, Dom, Fis, <i>Typha</i> and lotus collection
Poolankulam	29.1	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i>	Irr, Dom, Fis, <i>Typha</i> and lotus collection
Kuttuvankulam	2.2	NP, C	N	UP	PWD	-	-	Irr, Dom
Marayan Kulam	5.7	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%) <i>Prosopis juliflora</i> (5%)	Irr, Dom
Theroor Kulam	169.6	NP, C	Y	UP	PWD	En, Sn, Dp	<i>Eichhornia</i> (10%) <i>Ipomoea carnea</i> (5%)	Irr, Fis, Dom, <i>Trapa</i> collection
Kothan Kulam	18.2	NP, C	N	UP	PWD	Sn, En	<i>Prosopis juliflora</i> (10%)	Irr
Manickaputheri Kulam	7.7	NP, C	N	UP	PWD	Sn	<i>Eichhornia</i> (60%) <i>Ipomoea carnea</i> (60%)	Irr, Dom
Pallikondan Kulam	3.2	NP, C	N	UP	PWD	En	-	Irr, Dom
Kumaran Kulam	3.2	NP	N	UP	PWD	En	-	Irr, FC
Mankulam	18.2	NP, C	N	UP	PWD	Sn, En	<i>Prosopis juliflora</i> (5%)	Irr, FC, reed collection



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Ramapuram Kulam	2.4	NP, C	Y	UP	PWD	-	<i>Ipomoea carnea</i> (5%)	Irr, Dom, lotus, <i>Typha</i> collection
Andarkulam	18.2	NP, C	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Amaravathikulam	10.0	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Chettikulam	8.1	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (2%)	Irr, Dom, Fis, <i>Typha</i> collection
Athanimarkulam	11.0	NP, C	N	UP	PWD	En, Sn	<i>Prosopis juliflora</i> (5%)	Irr, Dom
Perumalkulam	8.1	NP, C	N	UP	PWD	En, Sn	<i>Prosopis juliflora</i> (1%) <i>Ipomoea carnea</i> (10%)	Irr, reed collection
Eravikulam	3.2	NP, C	N	UP	PWD	Sn, Dp	<i>Eichhornia</i> (15%)	Irr
Alathoor Kulam	10.4	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Ramasamudrakulam	30.4	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Narikulam	?	NP, C	Y	UP	PWD	-	-	Irr, Dom
Pillaiyarkulam	9.3	NP, C	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Gnanambalkulam	12.6	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Kumarasakulam	8.3	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Ramanputhoor Kulam	5.9	NP, C	Y	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (5%)	Irr, Dom
Pannikundukulam	5.0	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (5%) <i>Eichhornia</i> (5%) <i>Prosopis juliflora</i> (5%)	Irr, Dom, Fis
Vilakkanar Kulam	6.9	NP, C	Y	UP	PWD	-	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Thandanayagan Kulam	12.8	NP, C	N	UP	PWD	Sn	-	Irr
Marungoor Periakulam	17.3	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (10%) <i>Eichhornia</i> (10%)	Irr, Dom, <i>Typha</i> & lotus collection
Thalakulam	26.2	NP, C	Y	UP	PWD	En, Fl	<i>Eichhornia</i> (10%) <i>Ipomoea carnea</i> (10%)	Irr, Dom, Fis
Palkulam	18.2	NP, C	Y	Notified for BS	PWD	En, Dp	<i>Eichhornia</i> (15%) <i>Ipomoea carnea</i> (15%)	Irr, Dom, Tile industry
Nullikulam	1.7	NP, C	N	UP	PWD	En, Fl, Dp	<i>Eichhornia</i> (15%) <i>Ipomoea carnea</i> (40%)	Irr, Dom, <i>Typha</i> & <i>Scirpus</i> collection
Nankulam	2.1	NP, C	N	UP	PWD	En, Sn, Dp	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Sadayan Kulam	4.9	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (15%)	Irr, Dom
Suchindrum Kulam	88.2	NP, C	Y	PT, notified for BS	PWD	Fl, Dp, Agri. runoff	<i>Eichhornia</i> (40%) <i>Ipomoea carnea</i> (35%)	Irr, Dom, Fis
Nadankulam	1.1	NP, C	N	UP	PWD	Sn	<i>Ipomoea carnea</i> (5%)	Dom
Chenkulam	3.3	NP, C	N	UP	PWD	En	-	Irr, Dom, Fis
Murikulam	2.1	NP, C	N	UP	PWD	En, Sn, Dp	<i>Ipomoea carnea</i> (10%) <i>Eichhornia</i> (50%)	Irr

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Nedunkulam	7.5	NP, C	N	UP	PWD	En, Sn, Dp	<i>Ipomoea carnea</i> (60%) <i>Eichhornia</i> (15%)	Irr, Fis, Dom
Thathiyar Kulam	48.6	NP, C	N	UP	PWD	En, Dp	<i>Eichhornia</i> (5%) <i>Ipomoea carnea</i> (30%)	Irr, Dom, <i>Typha</i> collection
Parakkai Kulam	86.2	NP, C	Y	PT, part of BS	PWD	En, Dp	<i>Ipomoea carnea</i> (15%) <i>Eichhornia</i> (60%)	Irr, Fis, Dom
Thanumalayan Kulam	2.9	NP, C	N	UP	PWD	En	-	Irr, Dom
Kannanpathi Kulam	14.0	NP, C	N	UP	PWD	En, Sn	<i>Prosopis juliflora</i> (10%)	Irr, Dom, <i>Typha</i> collection, lotus & FC
Thananjayan Kulam	2.2	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (15%), <i>Ipomoea carnea</i> (10%)	Irr, Dom, lotus & FC
Alaganar Kulam	5.6	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (10%) <i>Prosopis juliflora</i> (5%)	Irr, Dom
Sabyar Kulam	1.3	NP, C	N	UP	PWD	Dp	<i>Ipomoea carnea</i> (15%) <i>Eichhornia</i> (60%)	Irr, Dom
Chemman Kulam	9.3	NP, C	N	UP	PWD	Sn, Ip	<i>Ipomoea carnea</i> , <i>Eichhornia</i>	Irr, Dom
Polaiyan Kulam	2.8	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Mantharamputhoor Kulam	6.2	NP, C	Y	UP	PWD	-	-	Irr, Dom
Kannimarkundu Kulam	3.4	NP, C	N	UP	PWD	En	-	Irr, Dom
Kandukirishi Kulam	6.8	NP, C	Y	UP	PWD	-	-	Irr, Dom
Puthanar Kulam	10.1	NP, C	N	UP	PWD	En, Sn	-	Irr, FC, <i>Typha</i> collection
Pallakulam	16.2	NP, C	N	UP	PWD	Sn	<i>Prosopis juliflora</i> (15%)	Irr, Dom, Grz, <i>Typha</i> collection
Piranthaneri Kulam	18.2	NP, C	Y	UP	PWD	En, Fl	-	Irr, Dom
Narayananeri Kulam	6.3	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (2%)	Irr, Dom
Othapanai Kulam	11.9	NP, C	Y	UP	PWD	Sn, En	<i>Ipomoea carnea</i>	Irr, Dom, FC
Pattukulam	5.1	NP, C	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (50%)	Irr, Dom
Athamozhi Kulam	19.4	NP, C	N	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Karumpattukulam	6.9	NP, C	Y	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom, FC, lotus culture
Annauikulam	3.4	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Rajendrikulam	4.1	NP, C	Y	UP	PWD	En	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Korandankulam	4.9	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (5%)	Irr, Dom
Sundaranair Kulam	1.5	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Arasandarkulam	1.2	NP, C	N	UP	PWD	Dp	<i>Ipomoea carnea</i> (5%) <i>Eichhornia</i> (50%)	Irr, Dom
Variyoor Puthukulam	57.4	NP, C	Y	UP	PWD	Fl, Sn, En,	<i>Ipomoea carnea</i> (12%) <i>Prosopis juliflora</i> (1%)	Irr, Dom, Grz
Moolikulam	10.1	NP, C	N	UP	PWD	En	-	Irr, Dom

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Pottalkulam	0.6	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (15%)	Dom
Melakarunkulam	31.4	NP, C	Y	UP	PWD	En, Fl, Sn	<i>Ipomoea carnea</i> (10%) <i>Prosopis juliflora</i> (2%)	Fis, Dom, Irr
Punnarkulam	13.1	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> <i>Prosopis juliflora</i>	Irr, Fis
Chenkulam	26.3	NP, C	N	UP	PWD	Sn, Dp	<i>Ipomoea carnea</i>	Dom, FC, Irr
Pallakulam	10.9	NP, C	N	UP	PWD	En	<i>Prosopis juliflora</i>	Irr, Grz
Muthaliar Kulam	11.4	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (1%) <i>Prosopis juliflora</i>	Irr, Dom
Meliyan Kulam	4.0	NP, C	N	UP	PWD	En, Fl	<i>Ipomoea carnea</i> (5%) <i>Eichhornia</i> (5%)	Irr, Dom, Fis
Pallikondan Kulam	3.4	NP, C	N	UP	PWD	-	<i>Ipomoea carnea</i> (10%)	Irr, Dom
Valasoundari Kulam	7.2	NP, C	N	UP	PWD	Fl	<i>Ipomoea carnea</i> (5%) <i>Prosopis juliflora</i> (20%)	Irr, Dom
Purushothamaneri Kulam	5.4	NP, C	N	UP	PWD	-	-	Irr
Thulukan Kulam	3.1	NP, C	?	UP	PWD	-	<i>Ipomoea carnea</i> (2%)	Irr, Dom
Voyila Kulam	10.7	NP, C	Y	UP	-	-	-	Irr
Dakkar Kulam	24.3	NP, C	Y	UP	PWD	En, Sn	-	Irr, Dom
Agasthyan Puthukulam	4.9	NP, C	?	UP	PWD	-	-	Irr, Dom
Achenkulam	11.8	NP, C	Y	UP	PWD	En	-	Irr, Dom
Kauerkulam	4.2	NP, C	Y	UP	PWD	En	-	Irr, Dom
Putheri Kulam	7.5	NP, C	Y	UP	PWD	Sn, Dp	<i>Eichhornia</i> <i>Ipomoea carnea</i> (30%)	Irr, Dom
Erattai Kulam	6.8	NP, C	N	UP	PWD	En	<i>Eichhornia</i> (5%) <i>Ipomoea carnea</i>	Irr, Dom, lotus & FC
Champakulam	3.2	NP, C	Y	UP	PWD	-	-	Dom, <i>Trapa</i> seed collection
Poolankulam	19.4	NP, C	Y	UP	PWD	En, Fl, Sn	<i>Ipomoea carnea</i> (25%) <i>Eichhornia</i> (10%)	Irr, Dom, Fis, <i>Typha</i> & <i>Scirpus</i> collection.
Putheri Periakulam	44.5	NP, C	N	UP	PWD	En, Dp	<i>Ipomoea carnea</i> <i>Eichhornia</i> (5%)	Irr, Dom
Ananthan Kulam	2.7	NP, C	N	UP	PWD	Sn, En	<i>Ipomoea carnea</i> (25%) <i>Eichhornia</i> (15%)	Irr, Dom, lotus & FC
Avayan Kulam	4.4	NP, C	N	UP	PWD	En, Sn	<i>Ipomoea carnea</i> (10%)	Irr, Dom <i>Typha</i> collection